

## LETTER

## Can COVID-19 virus be transmitted through sex?

Dear Editor,


Conflicting evidence regarding the presence of severe acute respiratory syndrome-corona virus-2 has made confusions in proposing a guideline for safe sexual practices during the pandemic. Some small-scale studies have failed to detect virus in semen or vaginal secretions while another study by Li et al, semen sample showed positive for the virus in 15.8% respondents infected with COVID-19.<sup>1-3</sup> It was also noted that 26.7% patients in acute stage of the disease and 8.7% of the recovered patients showed positive results when tested in real-time reverse transcriptase polymerase chain reaction assay. Though the presence of virus even in recovered patients may ring alarm bells, it is yet not sufficient to dissuade healthy individuals from sexual activities throughout the uncertain course of the pandemic. It is worth to remember that, contrary to popular belief, viral genomes of many viruses like certain adenoviruses, bunyaviruses, flaviviruses, hepadnaviruses, herpesviruses, paramyxoviruses, and so forth, which do not have a typical sexual transmission, are still detected in semen.<sup>4</sup> The same was true for the relatively newer viruses such as Zika virus (ZIKV) and Ebola virus (EBOV). Further studies have demonstrated very low infectivity, only for a short period in patients infected with high viral load of ZIKV, through sexual route.<sup>5</sup> Similarly in EBOV, sexual transmission could rarely be confirmed, despite the detection of RNA in the semen of the survivors more than 1 year after acute infection. It highlights the importance of infectivity of the virus which is the prerequisite for disease transmission. Unfortunately, infectivity cannot be fully established by currently popular molecular methods of virus detection like polymerase chain reaction and deep sequencing approaches. Instead age-old techniques of virus isolation in cell culture or laboratory animals remain the only direct and definitive approach for proving infectivity, which is slower, more laborious, and hazardous than newer methods.<sup>4</sup> Hence a definitive statement regarding sexual transmissibility is not possible unless infectivity is proved by virus isolation.

We know that every secretion in our body, not mere semen and vaginal secretion, has potential role in sexual acts. Risk of disease transmission is well established through saliva and aerosolized particles while the role is questionable through feco-oral route. These facts may prompt one to preach sexual abstinence even among healthy individuals. But considering the negative impact in human mind an uncertain period of abstinence can cause, it is never a healthy advice. Abstinence recommendation may be traumatizing and stigmatizing especially to groups like sexual and gender minorities, by invoking the bad memories they had went through during AIDS crisis. Psychological support should be available to every individual and customized advices should be given considering the contexts around the particular client's life. A guideline

to safer sexuality has been proposed by Turban et al.<sup>6</sup> But it should be subjected to systematic revision according to the ever-changing realities in pandemic and post pandemic era.

## CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

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